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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,480	01/20/2006	Philippe Mutsaerts	1446 US/PCT	9917
7590		01/11/2008		
Vesuvius Attn: Robert S Klemz Jr 27 Noblestown Road Carnegie, PA 15106-1632			EXAMINER KERN, KEVIN P	
			ART UNIT 1793	PAPER NUMBER
			MAIL DATE 01/11/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/565,480	<b>Applicant(s)</b> MUTSAARTS, PHILIPPE	
	<b>Examiner</b> Kevin P. Kerns	<b>Art Unit</b> 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 23-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23-34 is/are rejected.
- 7) ☒ Claim(s) 23 and 34 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 January 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to because the term "D cision" in the last portion of the flowchart of Figure 1 should be corrected to be "Decision". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

In this instance, the phrase "The invention also relates to" is a phrase that can be implied and should be revised accordingly.

3. The disclosure is objected to because of the following informalities: in the 10<sup>th</sup> line of paragraph [0005] of the substitute specification dated November 5, 2007, the "strikethrough" term "a" should be deleted before "radial wear". In the last line of paragraph [0012], the (patent) reference is not cited in an Information Disclosure Statement, and the application/patent number itself is believed to be in error, as the examiner cannot find any such document upon typing this patent number into the database. Correction of the application/patent number in paragraph [0012] and/or submission of this document in an Information Disclosure Statement are requested. In the 2<sup>nd</sup> line of paragraph [0015], replace "plates" with either "plate" or "plate's" before "history". Appropriate correction is required.

### ***Claim Objections***

4. Claims 23 and 34 are objected to because of the following informalities: in the 3<sup>rd</sup> line of claim 23, it is suggested to insert "said method" before "comprising" for clarity.

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In the 9<sup>th</sup> line of claim 34, it is suggested to insert a comma after "variables" for clarity.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 23-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to independent claims 23 and 34, it is unclear what the limitation "whether to reuse or reject" distinctly embodies, as no process steps related to this limitation exist in claims 23-33, and no distinct apparatus structures related to this limitation exist in claim 34. In this instance, corresponding step(s) and structure(s) relating to reusing or rejecting are suggested to clarify this limitation.

Claim 23 recites the limitations "the flow" and "the pouring". There is insufficient antecedent basis for these limitations in the claim.

With regard to independent claim 23, both instances of the term "them" in the 4<sup>th</sup> line of the claim are unclear, and it is suggested to replace "them" with "said parameters" for clarity.

Claim 24 recites the limitations "the valve cylinder end" and "the valve cylinder". There is insufficient antecedent basis for these limitations in the claim.

Claim 25 recites the limitation "the local conditions of use". There is insufficient antecedent basis for this limitation in the claim.

Claim 26 recites the limitation "the instant determination". There is insufficient antecedent basis for this limitation in the claim.

Claim 28 recites the limitation "the same flow rate". There is insufficient antecedent basis for this limitation in the claim.

Claim 29 recites the limitations "the radial wear" and "the gate". There is insufficient antecedent basis for these limitations in the claim.

Claim 34 recites the limitations "the control", "the flow", "the pouring", "the results", and "the operations". There is insufficient antecedent basis for these limitations in the claim.

### ***Response to Amendment***

7. The declaration under 37 CFR 1.132 filed November 5, 2007 is sufficient to overcome the prior 35 USC 103(a) rejections of all claims of record.

### ***Allowable Subject Matter***

8. Claims 23-34 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

### ***Response to Arguments***

9. The examiner acknowledges the applicant's amendment provided with the request for continued examination, a substitute specification, and a declaration under 37 CFR 1.132, all of which were received by the USPTO on November 5, 2007. Upon review, new objections to the drawings, abstract, specification, and claims, as well as new 35 USC 112, 2<sup>nd</sup> paragraph rejections, are raised in above sections 1-6. The declaration under 37 CFR 1.132 overcomes the prior 35 USC 103(a) rejections (see above section 7). The applicant has cancelled claims 12-22, while adding new claims 23-34. Claims 23-34 are currently under consideration in the application, and all claims would be in condition for allowance if the 35 USC 112, 2<sup>nd</sup> paragraph rejections would be overcome (see above section 8).

### ***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kevin P. Kerns whose telephone number is (571) 272-1178. The examiner can normally be reached on Monday-Friday from 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jonathan Johnson can be reached on (571) 272-1177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kevin P. Kerns *Kevin Kerns* 1/7/08  
Primary Examiner  
Art Unit 1793

*KPK*  
kpk  
January 7, 2008